AMENDMENTS TO THE ABSTRACT

Please substitute the following paragraph(s) for the abstract now appearing in the currently filed specification:

With a method for determining and tracking a changing, true position and orientation of a magnetic field sensor within a three-dimensional magnetic field space from the values measured by the magnetic field sensor, the magnetic field space is structured in a preceding calibration mode into a three-dimensional grid with equidistant grid points. All values measured by the magnetic field sensor, which is placed successively and with constant orientation in all of the grid points, are then stored in a calibration table as calibration positions and calibration orientations allocated to the real positions of the grid points in the magnetic field space. To obtain a robust method that provides precise results for calculating the images for sight simulators even in magnetic fields with strong distortion or interference, a A linear interpolating transformation of the measuring position in the real magnetic field space is executed for the continuously measured, actual measuring values from the magnetic field sensor by using respectively four calibration positions taken from the calibration table, which span a tetrahedron that encloses the measuring position.